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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/762,991 | 02/14/2001 | Ning Guo | 22171.240 | 2008 |
| 27683 | 7590 | 09/21/2004 | | |
| HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202 | | | EXAMINER LEE, CHI HO A | |
| | | | ART UNIT 2663 | PAPER NUMBER |

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,991

Applicant(s)

GUO ET AL.

Examiner

Andrew Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 6-12, 14--21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12, 14, 19 and 21 is/are allowed.
- 6) ☒ Claim(s) 4, 6-11, 15-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4, 6, 7, 10, 11, 15, 20, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites, "wherein no ARQ block includes any tail bits and the physical layer frame includes multiple tail bit". It is unclear where the tail bits are located. In light of specification, fig. 2 teaches physical layer frame 52 that includes the ARQ blocks 58.

Claim 15, refer to Claim 4, it is unclear where the tail bits are located.

Claim 7, the recitation "wherein the number of ARQ blocks is response to the environment for producing a relatively high throughput" is merely functional in the apparatus claim. While functional language may not be indefinite, it is unclear what structure enables the action "producing a relatively high throughput" to be performed. Clearly, ARQ blocks lack any structure. Claim 6 depends on Claim 7.

Claim 10, refer to Claim 7, wherein "to balance requirement for data transmission and voice transmission" phrase is functional language. FEC blocks and ARQ blocks lack structure.

Claim 11, refer to Claim 7, wherein "to promote efficient operation depending on a wireless environment and mobile station complexity" phrase is functional language. FEC blocks and ARQ blocks lack structure. Furthermore, it is unclear what is meant by

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“mobile station complexity”. Applicant is request to reference the specification so mete and bounds can be determined.

Claim 20, it is unclear what is meant by “mobile station complexity”. Applicant is request to reference the specification so mete and bounds can be determined.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 7, 8, 16, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Jayapalan U.S. Patent Number 5,533,019.

Re Claim 7, the recitation “a node of a spread spectrum wireless network” will be deem intend of use and no patentable weight will be given because the phrase is not essential to understand limitation. Fig. 1 teaches a base station (an apparatus comprising a node) for transmitting wireless signals wherein the signal is according to fig. 4 wherein the frame structure 60 includes one or more FEC blocks 385 and within FEC includes one or more MDLP bits (ARQ blocks) (See col. 7, lines 1-10) wherein the MDLP blocks includes information data and plurality of continuity bits (overhead bits) (See col. 5, lines 45-56). ARQ is inherently response to the noisy environment to retransmit data and reproduce data for relatively high throughput.

Re Claim 8, refer to Claim 7, wherein the base station supports both voice and data hence, the ARQ is responsive to whether the information is voice or data.

Re Claims 16, 17, refer to Claims 7, 8, fig. 1 teaches CDPD 34 interface (an interface) for receiving information bits from mobile station 7; MD-IS 36 (an interface) for delivering the information bits to Data Network 38 (a second network); wherein the BS (means for arranging) formats the data according to frame structure of fig. 4.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayapalan U.S. Patent Number 5,533,019.

Re Claim 9, refer to Claim 7, and further teaches that continuity bits (overhead bits) blocks the MDLP blocks 68 encoded by FEC Reed Solomon code. Jayapalan fails to explicitly teach that the FEC convolutional code. However, it is known to one skill that a number of FEC codes are possible for the purpose of forming frame, including convolutional codes, block codes, Hamming codes, Reed Solomon codes, etc and are available to one skilled for FEC implementation. Whether code is used is Reed Solomon or Convolutional, both serves to improve communication reliability. One skilled in art the art would have been motivated to any well known FEC codes for improving communication reliability. Therefore, it would have been obvious to one ordinary skilled to modify the Reed Solomon FEC code used in Jayapalan with another

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well known FEC codes such as the Convolutional FEC codes to improve communication reliability.

Claim 18, refer to Claim 9, further teaches CDPD 34 interface (an interface) for receiving information bits from mobile station 7; MD-IS 36 (an interface) for delivering the information bits to Data Network 38 (a second network); wherein the BS (means for arranging) formats the data according to frame structure of fig. 4.

Response to Arguments

7. Applicant's arguments with respect to claims 4, 6-11, 15-18, 20 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

8. Claims 12, 19, 14, and 21 are allowed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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